

ABSTRACT OF THE INVENTION

5 A method and apparatus is disclosed for
determining the range between two planes, ownship (10) and
target (12). Model data (66) estimating the velocity and
position of target (12) is compared to actual flight path
data of the target (12) passively received by ownship
(10). The model data (66) and actual data is compared,
and an error measurement is calculated. The model data is
also subject to position and velocity constraints (78 and
10 82) which penalize unrealistic estimates. The error
measurement and penalties are used to create a
perturbation model (90) which is added to the model data
to generate new model data. When the model data (66)
conforms closely to the actual data, a range is computed
15 from the model data (66).